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APPLICATION NO.	FILI	NG DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N	
10/064,317	07/02/2002		Patricia S. Bunt	BUR920010174	8271	
30607	7590	04/08/2003				
		N & WATTS LL	EXAMINER			
18 EAST UN MESA, AZ		DRIVE, #101		GUERRERO	GUERRERO, MARIA F	
				ART UNIT	PAPER NUMBER	

DATE MAILED: 04/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)					
	—						
Office Action Summary	10/064,317	BUNT ET AL.					
•	Examiner	Art Unit					
- The MAILING DATE of this communication app	Maria Guerrero	2822					
Period for Reply	rears on the cover sheet with the t	orrespondence address					
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). Status	36(a). In no event, however, may a reply be timed within the statutory minimum of thirty (30) day will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. 8 133)					
1)⊠ Responsive to communication(s) filed on 28 J	anuani 2003						
	is action is non-final.						
3) Since this application is in condition for allowa		association as to the morite in					
closed in accordance with the practice under <i>l</i> Disposition of Claims	Ex parte Quayle, 1935 C.D. 11, 4	53 O.G. 213.					
4) Claim(s) 1-17 is/are pending in the application.							
4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.							
5) Claim(s) is/are allowed.	Claim(s) is/are allowed.						
S) Claim(s) <u>8-17</u> is/are rejected.							
7) Claim(s) is/are objected to.	Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/or Application Papers	election requirement.	. •					
9)☐ The specification is objected to by the Examiner							
10) ☐ The drawing(s) filed on is/are: a) ☐ accep	ted or b)⊡ objected to by the Exar	miner.					
Applicant may not request that any objection to the		* *					
11) The proposed drawing correction filed on	is: a) ☐ approved b) ☐ disappro	ved by the Examiner.					
If approved, corrected drawings are required in rep	•						
12) The oath or declaration is objected to by the Exa	aminer.						
Priority under 35 U.S.C. §§ 119 and 120		,					
13) Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 119(a))-(d) or (f).					
a) ☐ All b) ☐ Some * c) ☐ None of:							
1. Certified copies of the priority documents							
 3. Copies of the certified copies of the priori application from the International Burn * See the attached detailed Office action for a list of 	eau (PCT Rule 17.2(a)).	_					
14) Acknowledgment is made of a claim for domestic	priority under 35 U.S.C. § 119(e) (to a provisional application).					
a) ☐ The translation of the foreign language prov 15)☐ Acknowledgment is made of a claim for domestic							
Attachment(s)	, , , , , , , , , , , , , , , , , , , ,						
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449) Paper No(s)	5) Notice of Informal P	(PTO-413) Paper No(s) atent Application (PTO-152)					

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DETAILED ACTION

This Office Action is the in response to the Election filed January 28, 2003.
 Claims 1-17 are pending.

Election/Restrictions

2. Applicant's election without traverse of Group II (claims 8-17) in Paper No. 3 is acknowledged.

Claims 1-7 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 3.

Information Disclosure Statement

The information disclosure statement filed July 7, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Applicant has not provided the documents listed on the Remarks.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 4. Claims 8 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerzberg et al. (U.S. 4,233,671).

Gerzberg et al. teaches electrically activating a dopant on a programmable element in a semiconductor device. Gerzberg et al. discloses altering the bonding configuration of the programmable element and using laser anneal (col. 1, lines 5-10, col. 2, lines 1-15, 25-35, col. 4, lines 28-50, col. 5, lines 5-32

5. Claims 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura et al. (U.S. 4,462,150).

Nishimura et al. teaches electrically activating a dopant on a programmable element in a semiconductor device (Abstract, col. 2, lines 5-15). Nishimura et al. shows heating the programmable element and rapidly cooling in less than a second (it is inherent)(col. 3, lines 28-40). Nishimura et al. teaches exposing the programmable element to actinic radiation using laser anneal (Abstract, col. 3, lines 28-35). Nishimura et al. shows using a laser having a wavelength of light that will not be absorbed by a cap layer (silicon dioxide) but that will be absorbed by the semiconductor material (Fig. 2C, col. 3, lines 30-35, col. 4, lines 5-42).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (U.S. 4,462,150) in view Mehta et al. (U.S. 5,795,627).

Regarding claim 14, Nishimura et al. does not specifically show the laser comprising a 308 nm excimer laser. However, Mehta et al. teaches using a 308 nm excimer laser as an energy source as well known in the art (Abstract, col. 6, lines 1-11, 46-56).

Since, Nishimura et al. and Mehta et al. are both from the same field of endeavor of laser irradiation process, the purpose disclosed by Mehta et al. would have been recognized in the pertinent art of Nishimura et al.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Nishimura et al. reference by specifying the use of 308 nm excimer laser as taught Mehta et al. because the selection of any appropriated laser source is within the capabilities of a skilled in the art.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (U.S. 4,462,150).

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Nishimura et al. teaches doping a semiconductor material, exposing the programmable element to actinic radiation, and determining the resistance value (col. 2, lines 65-68; col. 3, lines 1-2, 23-27, 38-47).

Nishimura et al. does not specifically show determining a test resistance value of the programmable element and comparing to a specific precise resistance. However, Nishimura et al. measured the resistance value and use the value to determine that the circuit elements and the spare element were electrically connected (col. 3, lines 38-47; col. 4, lines 20-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Nishimura et al. is selecting a precise resistance in order to confirm the electrical activation process and to avoid defects (col. 3, lines 38-47).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wu (U.S. 4,198,246) teaches a method of reducing the resistivity of a doped polycrystalline silicon film with laser irradiation. Johnson (U.S. 4,677,742) shows exposing to actinic radiation to activate a dopant. Mukai (U.S. 4,617,723), Shacham et al. (U.S. 4,845,045), and Jones, Jr. et al. (U.S. 4,835,118) teach programming programmable elements. Somit Talwar et al. "Ultra-Shallow, abrupt, and highly-activated junctions by low-energy ion implantation and laser annealing" and C. Laviron et al. "Excimer-laser activation of dopants in silicon: a new concept for uniform

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treatment over whole die area" teach using a 308 nm excimer laser as an energy source

as well known in the art.

9. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Maria Guerrero whose telephone number is 703-305-

0162.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Amir Zarabian can be reached on 703-308-4905. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-308-7722

for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-308-

0956.

Maria Guerrero Patent examiner

April 3, 2003

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